

- Fig. 5. Spines on terminal joints of leg.
 Fig. 6. Dorsal view; walking-legs removed.
 Fig. 7. Terminal joints of ovigerous leg.
 Fig. 8. Spine of oviger.
 Fig. 9. Palp.
 Fig. 10. Chela.
 Fig. 11. Oviger with egg-mass.

XXIV.—A Revision of the South-American Siluroid Fishes of the Genus *Corydoras*, with a List of the Specimens in the British Museum (Natural History). By C. TATE REGAN, M.A.

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THE Callichthyid fishes with the occipital process extending to the plate at the base of the dorsal fin-spine may be divided into two genera—*Corydoras*, Lacep., 1803, with 6 to 8 soft rays in the dorsal and the base of the fin about equal to its distance from the adipose fin, and *Brochis*, Cope, 1871, with 9 to 11 soft rays in the dorsal fin, which is more extended, its base considerably more than its distance from the adipose fin. In his recent list of Neotropical fishes Eigenmann recognizes the genus *Osteogaster*, Cope, including therein two species which have the humeral shields somewhat larger than usual. One of these is a *Corydoras*, viz. *C. eques*, Steind., which is closely related to *C. nattereri* and still more closely to *C. macrosteus*, described below as new; the other is of a very different type, and should, in my opinion, be placed in the genus *Brochis*; it is *B. splendens*, Casteln.

There are so many species of *Corydoras* unrepresented in the British Museum collection and of uncertain position that I find it difficult to make a satisfactory key to the species.

Synopsis of the Species.

I. Interorbital width $\frac{1}{3}$ the length of head or less; snout more than $\frac{1}{2}$ the length of head.

Scutes in upper lateral series 23 1. *treitlii*.
 Scutes in upper lateral series 26 or 27 2. *kroneri*.

II. Interorbital width $\frac{2}{5}$ the length of head or more.

A. A series of spots along the side and a second series on the back.

1. Diameter of eye 6 or 7 in length of head 3. *micracanthus*.
 2. Diameter of eye 4 or 5 in length of head.
 Head $3\frac{2}{3}$ in the length 4. *microcephalus*.
 Head $3\frac{1}{3}$ to $3\frac{1}{2}$ in the length 5. *paleatus*.
 3. Diameter of eye $3\frac{1}{4}$ in length of head 6. *garbei*.

B. Spots smaller and more numerous.

1. Operculum $\frac{1}{2}$ as broad as deep 7. *agassizii*.
 2. Operculum more than $\frac{1}{2}$ as broad as deep.

a. Dorsal spine shorter than longest soft rays.
 8-13. *multimaculatus*, *julii*, *elegans*, *trilineatus*,
punctatus, *raimundi*.

b. Dorsal spine rarely a little shorter than first soft ray.

- Dorsal spine longer than head 14. *armatus*.
 Dorsal spine a little shorter than head..... 15. *polystictus*.
 Dorsal spine as long as head 16. *melanistius*.

C. A black arrow-shaped spot at base of caudal fin.
 17. *hastatus*.

D. Dark undulating longitudinal stripes..... 18. *undulatus*.

E. A dark lateral band; fins immaculate.

1. Depth of suborbital not more than its distance from upper lip.
 a. Depth of body $3\frac{1}{4}$ to $3\frac{1}{3}$ in the length .. 19. *melanotenia*.
 b. Depth of body $2\frac{1}{2}$ to 3 in the length.

Snout not shorter than postorbital part of head;
 edge of dorsal fin somewhat convex..... 20. *æneus*.

Snout shorter than postorbital part of head; edge
 of dorsal fin straight 21. *nattereri*.

2. Depth of suborbital twice its distance from the upper lip.
 22. *macrosteus*.

3. Suborbital extending from eye to upper lip.
 23. *equus*.

1. *Corydoras treitlii*.

Steind. Anz. Akad. Wien, 1906, p. 478.

Depth of body equal to or a little more than length of head, which is $2\frac{1}{2}$ to 3 in the length. Snout $1\frac{1}{3}$ to $1\frac{1}{2}$, diameter of eye $4\frac{1}{2}$ to 5, interorbital width 3 to $3\frac{3}{4}$ in the length of head. Barbels reaching gill-opening. Dorsal I 8; adipose fin preceded by 4 or 5 median scutes. Anal I 7. Pectoral spine a little shorter than that of dorsal. Scutes 23/21. Brownish above, yellowish below; a dark grey lateral stripe; caudal usually with dark upper and lower margins, rarely with a few spots on the middle rays.

R. Parnahyba.

Total length 66 mm.

2. *Corydoras kroniei*.

Ribeiro, A Lavoura, xi. no. 5, 1907, p. 189, fig.; Steind. Anz. Akad. Wien, 1910, p. 61.

Corydoras eigenmanni, R. von Ihering, Rev. Mus. Paulist. i. 1907, p. 35.

Depth of body about equal to length of head, $3\frac{1}{2}$ to 4 in

the length. Snout more than $\frac{1}{2}$ the length of head; diameter of eye 6 in length of head, interorbital width 3. Suborbital narrow; barbel nearly reaching gill-opening; males with bristles on sides of snout. Dorsal I 7-8; spine about $\frac{3}{5}$ length of head; soft rays decreasing from first, the fourth or fifth as long as spine; base equal to or less than distance from adipose fin. Anal I 6-7. Pectoral spine extending a little beyond base of pelvics. Scutes 26-27/22-23; humeral shields wide apart, each separated by 2 scutes from base of pelvic fin. Dark blotches at bases of dorsal and adipose fins alternate and are connected with a series of blotches on the side, which may unite to form a band; head spotted or reticulated; dorsal and caudal with series of spots on rays; lower fins with or without spots.

1-4 (co-types of *C. eigenmanni*). 45-60 mm.

Near Santos.

R. von Ihering.

3. *Corydoras micracanthus*, sp. n.

Depth of body 3 to $3\frac{1}{2}$ in the length, length of head 4. Diameter of eye 6 or 7 in length of head; snout as long as postorbital part of head or interorbital width. Suborbital narrow; barbels nearly or quite reaching gill-opening. Dorsal I 8; spine $\frac{1}{2}$ the length of head; fin small, rounded, its base less than its distance from adipose fin, which is preceded by 1 or 2 median scutes. Anal I 6. Pectoral spine not reaching base of pelvic fin. Scutes 25/22; humeral shields widely separated below, each separated by 2 scutes from base of pelvic fin. Yellow, with a series of 3 to 6 dark brownish or purplish spots along the side and a second series on the back; dorsal dusky anteriorly, sometimes with spots on rays; caudal barred; lower fins immaculate.

1-8 (types). 35-50 mm.
9-10.

Salta, Argentina.

" "

Borelli.

Steinbach.

4. *Corydoras microcephalus*, sp. n.

Depth of body 3 in the length, length of head $3\frac{3}{4}$. Snout as long as or a little longer than postorbital part of head; diameter of eye $4\frac{1}{2}$ in the length of head, interorbital width $2\frac{1}{2}$. Suborbital narrow; barbel nearly reaching gill-opening. Dorsal I 6-7; spine $\frac{3}{5}$ to $\frac{2}{3}$ the length of head; first and second rays longest, the edge of fin slightly convex; base about equal to distance from adipose fin, which is preceded by 1 or 2 median scutes. Anal I 6. Pectoral spine extending to base of pelvics. Scutes 22-23/20; humeral shields

not in contact below, each separated by $1\frac{1}{2}$ scutes from base of pelvic fin. A lateral series of 4 or 5 dark oblong spots, the third below the adipose fin; a similar series of spots on the back; dorsal dusky anteriorly and usually with spots on the rays; caudal usually barred with series of spots; lower fins immaculate or anal sometimes with a spot.

1-4 (types). 50 mm.

La Plata.

Doria.

5. *Corydoras paleatus*.

Callichthys paleatus, Jenyns, Zool. 'Beagle,' Fish. p. 113 (1842).

Corydoras marmoratus, Steind. Denkschr. Akad. Wien, 1879, p. 26, pl. v. fig. 1.

Corydoras paleatus, Eigenm. & Eigenm. Occ. Pap. Calif. Acad. i. 1890, p. 471.

? *Corydoras aurofrenatus*, Eigenm. & Kennedy, Proc. Acad. Philad. 1903, p. 507; Eigenm. & Ward, Ann. Carnegie Mus. iv. 1907, pl. xxxviii. fig. 4.

Corydoras ehrhardti, Steind. Anz. Akad. Wien, 1910, p. 60.

? *Corydoras meridionalis*, R. von Ihering, Rev. Mus. Paulist. viii. 1911, p. 381.

? *Corydoras nattereri triseriatus*, von Ihering, t. c. p. 386.

? *Corydoras flaveolus*, von Ihering, t. c. p. 387.

Depth of body $2\frac{3}{5}$ to 3 in the length, length of head $3\frac{1}{3}$ to $3\frac{1}{2}$. Snout as long as or a little longer than postorbital part of head; diameter of eye 4 to 5 in the length of head, interorbital width 2 to $2\frac{1}{2}$. Suborbital narrow; barbel rarely reaching gill-opening. Dorsal I 7-8; spine $\frac{2}{3}$ to as long as head; soft rays decreasing from first, which is longer than spine; base nearly equal to distance from adipose fin, which is preceded by 2 or 3 median scutes. Anal I 6. Pectoral spine extending to or beyond base of pelvics. Scutes 22-24/20-22; humeral shields not in contact below, each separated from base of pelvic fin by one scute. Three oblong dark spots along middle of side, respectively below the dorsal and adipose fins and on the caudal peduncle, connected with less definite spots on the back; both series of spots may unite to form longitudinal bands; dorsal dusky anteriorly and with spots on the rays; caudal barred; lower fins each with a single spot; sometimes some or all the fins immaculate.

La Plata; Rio Grande do Sul; Sta. Catharina.

1 (one of the types). 35 mm.

2-3. 70 mm.

4-6. 60 mm.

7-9. 25 mm.

10-11. Dried.

12 (co-type of *C. ehrhardti*).

Buenos Ayres.

Parana.

R. Grande do Sul.

Cordova.

Joinville.

Cambridge Mus.

White.

Salmin.

von Ihering.

Steindachner.

6. *Corydoras garbei*.

R. von Ihering, Rev. Mus. Paulist. viii, 1910, p. 383 (1911).

Depth of body $2\frac{2}{3}$ in the length, length of head 3. Snout 2 in length of head, interorbital width a little more than 2, diameter of eye $3\frac{1}{4}$. Barbels reaching gill-opening, Dorsal spine shorter than that of pectoral; base of dorsal longer than distance from adipose fin, which is preceded by 1 or 2 median scutes. A series of 5 spots along the side and 4 along the back; dorsal blackish anteriorly; caudal with 4 cross-bars.

Length 50 mm,

Rio San Francisco,

7. *Corydoras agassizii*.

? *Corydoras ambiacus*, Cope, Proc. Acad. Philad. 1871, p. 280.

Corydoras agassizii, Steind. Sitzungsab. Akad. Wien, lxxiv, 1877, p. 138, pl. xii, fig. 2.

? *Corydoras punctatus*, Eigenm. & Eigenm. Occ. Pap. Calif. Acad. i, 1890, p. 472.

Depth of body $2\frac{1}{2}$ to $2\frac{3}{5}$ in the length, length of head $3\frac{1}{4}$. Snout nearly $\frac{1}{2}$ length of head; diameter of eye 4 in length of head, interorbital width 2. Suborbital narrow, separated by a broad naked space from upper lip; barbels reaching gill-opening; operculum twice as deep as broad. Dorsal I 7; spine $\frac{3}{4}$ length of head; soft rays decreasing from first, which is longer than spine; edge of fin slightly concave; base equal to distance from adipose fin, which is preceded by 3 median scutes. Anal I 6-7. Pectoral spine extending beyond base of pelvics. Scutes 23/21; humeral shields not in contact below, each separated by one scute from base of pelvic fin. Sides with small brown spots; a yellowish lateral band bearing 3 longitudinal series of spots; dorsal blackish anteriorly and with series of spots on the rays; caudal barred with series of spots; anal spotted; pelvics and anal immaculate,

Amazon.

Total length 60 mm.

1. 25 mm,

R. Jurua.

Bach,

This specimen is too small for description, but shows the characteristic deep snout and narrow operculum.

8. *Corydoras multimaculatus*.

Steind. Anz. Akad. Wien, 1907, p. 291.

Depth of body $2\frac{2}{3}$ to more than $2\frac{1}{2}$ in the length, length of
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head 3. Snout $1\frac{2}{3}$ to nearly 2 in the length of head, diameter of eye 5, interorbital width 2. Barbels reaching gill-opening. Dorsal I 8; height of fin $1\frac{2}{3}$ to $1\frac{1}{2}$ in depth of body; base equal to distance from adipose fin, which is preceded by 2 median scutes. Anal I 6. Scutes 22/20. Head, body, and fins with numerous small dark spots.

Rio Preto, Bahia.

Total length 44 mm.

9. *Corydoras julii*.

Steind. Anz. Akad. Wien, 1906, p. 480.

Depth of body $2\frac{1}{2}$ to $2\frac{2}{3}$ in the length, length of head 3 to $3\frac{1}{3}$. Snout 2 in length of head, diameter of eye 4, interorbital width 2. Barbels not reaching gill-opening. Dorsal I 8; spine a little shorter than that of pectoral, which is as long as head; 3 median scutes before adipose fin. Anal I 6. Scutes 21/20. Head, upper $\frac{2}{3}$ of body, dorsal and caudal fins with numerous small dark spots, those on the caudal forming 7 to 10 transverse series. A lateral series of larger spots and a large black spot on upper part of dorsal fin.

R. Parahim.

Total length 52 mm.

10. *Corydoras elegans*.

Steind. Sitzungsber. Akad. Wien, lxxiv. 1876, p. 471; Eigenm. & Eigenm. Occ. Pap. Calif. Acad. i. 1890, p. 469.

Depth of body $2\frac{2}{3}$ in the length, length of head $3\frac{1}{2}$ to 4. Snout as long as or a little longer than postorbital part of head; diameter of eye $3\frac{1}{3}$ to $3\frac{1}{2}$ in the length of head, interorbital width 2. Suborbital narrow; barbel extending to gill-opening; breadth of operculum more than $\frac{1}{2}$ its depth. Dorsal I 7; spine as long as or a little shorter than head; rays decreasing from first or second, which are longer than spine; free edge straight or slightly convex; base about equal to distance from adipose fin, which is preceded by 2 or 3 median scutes. Anal I 6. Pectoral spine as long as head, extending beyond base of pelvics. Scutes 22-23/20; humeral shields not in contact, each separated by 1 or $1\frac{1}{2}$ scutes from base of pelvic fin. Yellowish; 3 series of brownish spots along middle of side; above them a brown band tapering posteriorly and a narrow band on each side of back; dorsal blackish superiorly; other fins immaculate.

Amazon (Cudajas and Teffé).

1-6. 40-50 mm.

Cudajas.

Mus. Comp. Zool.

11. *Corydoras trilineatus*.

Cope, Proc. Acad. Philad. 1871, p. 281, pl. vi. fig. 2.

? *Corydoras acutus*, Cope, *l. c.*

Very closely related to *C. elegans*, but with a larger eye, its diameter $\frac{1}{3}$ the length of head in a specimen of 49 mm. A yellowish lateral band with brownish margin above and below and blackish median line; dorsal rays blackish superiorly; caudal barred; anal spotted.

Ambyiacu R.

According to Eigenmann this species is the same as *C. agassizii*, but it has the shorter snout and broader operculum of *C. elegans*.

12. *Corydoras punctatus*.

Cataphractus punctatus, Bloch, Ausl. Fisch. pl. cccclxxvii. fig. 2 (1794).

A species resembling *C. elegans* and *C. trilineatus* in form and in coloration, the dorsal fin blackish superiorly and some spots along the middle of the side; caudal barred.

Surinam.

13. *Corydoras raimundi*.

Steind. Anz. Akad. Wien, 1907, p. 84.

Depth of body 3 to 4 in the length, length of head $3\frac{1}{4}$ to $3\frac{1}{2}$. Diameter of eye 5 to 6 in the length of head, interorbital width 2, length of snout 2. Dorsal I 8. Anal I 6. Pectoral fin usually a little shorter than head. Scutes 23-25/22-23. 3 longitudinal series of greyish-violet spots on the body; a blackish band across middle of dorsal fin; caudal with cross-bars.

Rio Parnahyba near Victoria.

14. *Corydoras armatus*.

Callichthys armatus, Günth. Proc. Zool. Soc. 1863, p. 230, fig.

? *Corydoras amphibelus*, Cope, Proc. Acad. Philad. 1871, p. 282.

Depth of body $2\frac{1}{3}$ to $2\frac{1}{2}$ in the length, length of head $3\frac{1}{2}$. Snout a little longer than eye, the diameter of which is $3\frac{1}{3}$ in the length of head; interorbital width 2. Suborbital narrow, its depth less than $\frac{1}{2}$ diameter of eye; barbel not reaching gill-opening. Dorsal I 7-8; spine as long as depth of body below it; soft rays decreasing from first, which is a little shorter than spine; base equal to or a little more than distance from adipose fin, which is preceded by 4 or 5 median scutes. Anal I 6-7. Pectoral spine as long as or

longer than head, extending to or beyond middle of pelvics. Scutes 22-23/20; humeral shields not in contact below, each separated by one scute from base of pelvic fin. Sides with small dark spots, strongest anteriorly, and forming longitudinal series above and below the lateral line; traces of spots on dorsal rays; other fins immaculate.

R. Amazon.

1-2 (types). 60 mm.
3-4. 55 mm.
5-8. 30-35 mm.

Xeberos.
Huallagas.
R. Jurua.

Higgins.
"
Bach.

According to Cope's description *C. amphibelus* seems to differ from *C. armatus* only in the barred caudal fin.

15. *Corydoras polystictus*, sp. n.

Depth of body $2\frac{1}{3}$ to $2\frac{1}{2}$ in the length, length of head $3\frac{1}{4}$ to $3\frac{1}{2}$. Snout strongly decurved, a little longer than diameter of eye, which is 3 in the length of head; interorbital width 2. Suborbital narrow; barbel nearly reaching gill-opening. Dorsal I 7; spine nearly as long as head; soft rays decreasing from first, which is as long as or a little longer than spine; base more than distance from adipose fin, which is preceded by 2 median scutes. Anal I 6. Pectoral spine as long as head, extending to middle of pelvics. Scutes 21-22/19-20. Longitudinal series of small dark spots on sides of body and on rays of dorsal fin; other fins immaculate.

1-2 (types). 35 mm.

Descalvados, Matto Grosso.

Ternetz.

16. *Corydoras melanistius*, sp. n.

Callichthys punctatus (non Bloch), Günth. Cat. Fish. v. p. 229 (1864).

Depth of body $2\frac{1}{2}$ in the length, length of head $3\frac{1}{2}$. Snout nearly $\frac{1}{2}$ length of head; diameter of eye $3\frac{1}{2}$ in the length of head, interorbital width 2 to $2\frac{1}{3}$. Suborbital narrow, its depth about $\frac{1}{2}$ diameter of eye; barbel not reaching gill-opening. Dorsal I 7; spine as long as head; soft rays decreasing from first, which is as long as spine; base a little more than distance from adipose fin, which is preceded by 4 median scutes. Anal I 6. Pectoral spine as long as or longer than head, extending to or beyond middle of pelvics. Scutes 21-23/19-20; humeral shields not in contact below, each separated by one scute from base of pelvic fin. 3 or 4 series of small dark spots on side; dorsal fin blackish, the colour extending on to the back below it; other fins pale, immaculate.

1-2 (types). 50 mm.

Essequibo.

Ehrhardt.

17. *Corydoras hastatus*.

Eigenm. & Eigenm. Proc. Calif. Acad. (2) i. 1888, p. 166, and Occ. Pap. Calif. Acad. i. 1890, p. 474.

Depth of body $2\frac{3}{4}$ in the length, length of head $3\frac{1}{2}$. Diameter of eye $3\frac{1}{2}$ in length of head and 2 in interorbital width. Barbels not extending beyond eye. Dorsal I 7-8; spine nearly as long as head. Anal 7-8. Pectoral spine a little longer than dorsal spine. Scutes 22/20; humeral shields not in contact below. Light brown; a jet-black lateral band ending at base of caudal in a large arrow-shaped spot, bordered posteriorly with white and again with a narrow blackish margin; minute black points on body and fins.

Amazon at Villa Bella.

Corydoras australis, Eigenm. & Ward (Ann. Carnegie Mus. iv. 1907, p. 123), from Paraguay, is said to be very closely related to *hastatus*, and perhaps identical with it; it has the same caudal spot, but the lateral band is represented by an indistinct dusky line.

18. *Corydoras undulatus*, sp. n.

Corydoras microps (non Eigenm. & Kennedy), Eigenm. & Ward, Ann. Carnegie Mus. iv. 1907, p. 123, pl. xxxviii. figs. 2, 3.

Depth of body $2\frac{1}{3}$ to $2\frac{1}{2}$ in the length, length of head $3\frac{1}{2}$ to 4. Diameter of eye 5 to 6 in length of head, interorbital width $1\frac{1}{2}$ to $1\frac{3}{4}$. Snout nearly as long as postorbital part of head; præorbital narrow; barbel nearly or quite reaching gill-opening. Occipital plate a little longer than broad. Dorsal I 7-8; spine $\frac{2}{3}$ length of head; second and third soft rays longest, fifth as long as spine; base of fin longer than distance from adipose, which is preceded by 3 or 4 median scutes. Anal I 7. Caudal deeply emarginate. Pectoral spine extending to base of pelvics. Scutes $\frac{21-23}{19-20}$; humeral shields not in contact below, on each side separated by a single scute from base of pelvics. Yellowish, with dark purplish spots tending to run together, forming undulating longitudinal bands; fins with or without series of spots.

La Plata.

1 (type). 55 mm.
2-3. 35 mm.

La Plata.
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Wolterstorff.
Arnold.

19. *Corydoras melanotenia*, sp. n.

Depth of body $3\frac{1}{4}$ to $3\frac{1}{3}$ in the length, length of head $3\frac{1}{2}$ to $3\frac{3}{4}$. Diameter of eye $5\frac{1}{2}$ in the length of head, interorbital

width $2\frac{1}{4}$ to $2\frac{1}{3}$. Snout $\frac{1}{2}$ the length of head; suborbital a little narrower than diameter of eye; barbel nearly or quite reaching gill-opening. Dorsal I 7; spine about $\frac{3}{5}$ length of head; 3 or 4 rays longer than spine; edge of fin slightly convex; base nearly equal to distance from adipose fin, which is preceded by 3 or 4 median scutes. Anal I 6. Pectoral spine extending to base of pelvic. Scutes $\frac{24}{22}$; humeral shields widely separated below, and each separated by one scute from base of pelvic fin. Brownish above, yellowish below; a broad blackish lateral band; fins immaculate.

Colombia.

1-2 (types). 50 mm.

Honda.

Leighton.

From *C. aeneus* of the same size they differ in the more elongate form, smaller head, longer snout, narrower interorbital region, and more numerous scutes.

20. *Corydoras aeneus*.

Hoplosoma aeneum, Gill, Ann. Lyc. N. York, vi. 1858, p. 403.

Corydoras microps, Eigenm. & Kennedy, Proc. Acad. Philad. 1903, p. 506.

? *Corydoras venezuelanus*, R. von Ihering, Rev. Mus. Paulist. viii. 1911, p. 385.

Depth of body $2\frac{1}{2}$ to 3 in the length, length of head $3\frac{1}{3}$ to $3\frac{2}{3}$. Diameter of eye 5 to 6 in length of head, interorbital width 2. Snout as long as or longer than postorbital part of head; suborbital not very narrow, in the adult its depth about equals the diameter of eye or its distance from upper lip; barbels usually extending to gill-opening. Dorsal I 7-8; spine $\frac{2}{3}$ to $\frac{2}{3}$ the length of head; first or second soft rays longest, 2 to 6 rays longer than spine, free edge slightly convex; base about equal to distance from adipose fin, which is preceded by 3 to 5 median scutes. Anal I 6-7. Caudal deeply emarginate. Pectoral spine extending to or beyond base of pelvics. Scutes $\frac{21-23}{19-21}$; humeral shields not in contact below, on each side separated by a single scute from base of pelvic fins. Brownish above, yellowish below; a blackish lateral band broadening anteriorly into a blotch, which may join others on occiput and at base of dorsal fin; fins immaculate.

Trinidad to La Plata.

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|------------------|-----------------------------|------------|
| 1-3. 70 mm. | Granada. | Higgins. |
| 4-5. 50-60 mm. | Trinidad. | Guppy. |
| 6-8. 40 mm. | " | Hart. |
| 9. 60 mm. | Urucum, Matto Grosso. | Borelli. |
| 10-11. 40-50 mm. | Carandasinho, Matto Grosso. | " |
| 12. 70 mm. | Sara, Bolivia. | Steinbach. |

21. *Corydoras nattereri*.

Steind. Sitzungsab. Akad. Wien, lxxiv. 1877, p. 143, pl. xi. fig. 1.

Corydoras juquiae, R. von Ihering, Rev. Mus. Paulist. i. 1907, p. 37.

Depth of body $2\frac{3}{5}$ to 3 in the length, length of head $3\frac{1}{3}$ to $3\frac{1}{2}$. Diameter of eye $3\frac{1}{2}$ to 4 in the length of head, interorbital width $2\frac{1}{5}$ to $2\frac{1}{2}$. Snout blunt, shorter than postorbital part of head; suborbital narrow, less than diameter of eye; barbels just reaching gill-opening. Occipital plate longer than broad. Dorsal I 7; spine $\frac{3}{5}$ to $\frac{4}{5}$ the length of head; free edge of fin straight, the rays decreasing from the first; 1, 2, or 3 longer than spine; base about equal to distance from adipose fin, which is preceded by 2 to 4 median scutes. Anal I 5-7. Caudal deeply emarginate. Pectoral spine reaching anterior part or middle of pelvics. Scutes $\frac{21-23}{20-21}$; humeral shields not in contact below, on each side separated by one scute from base of pelvics. A dark lateral band broadening forwards; a dark spot below anterior part of dorsal fin; fins immaculate.

Eastern Brazil.

1-2. 50-55 mm.

Rio Janeiro.

R. von Ihering.

3-4 (co-types of *C. juquiae*).

R. Juquia, S. Paulo.

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50-55 mm.

22. *Corydoras macrosteus*, sp. n.

Depth of body $2\frac{3}{5}$ to 3 in the length, length of head $3\frac{3}{5}$ to $3\frac{4}{5}$. Diameter of eye 6 in length of head, interorbital width 2. Snout $\frac{1}{2}$ the length of head or less; suborbital deep, $1\frac{1}{2}$ the diameter of eye and twice its distance from the upper lip; barbels reaching gill-opening. Occipital plate longer than broad; process with concave edges. Dorsal I 7; spine $\frac{1}{2}$ the length of head or less; fin rounded, with 5 or 6 rays longer than spine; base less than distance from adipose fin, which is preceded by 3 or 4 median scutes. Anal I 6. Caudal emarginate. Pectoral spine reaching base of pelvics. Scutes $\frac{23-24}{21-22}$; humeral shields not in contact, on each side separated by one scute from base of pelvic fins. Brownish above, yellowish below; a broad dark lateral band tapering backwards; fins dusky.

San Paulo, Brazil.

1-4 (types). 60 mm.

Rio Piracicaba, San Paulo.

R. von Ihering.

23. *Corydoras eques*.

Steind. Sitzungsab. Akad. Wien, lxxiv, 1877, p. 140, pl. xii. fig. 3.

Depth of body $2\frac{1}{2}$ in the length, length of head $3\frac{1}{3}$. Diameter of eye 4 in length of head, interorbital width $2\frac{1}{4}$. Snout as long as postorbital part of head; suborbital very deep, reaching upper lip; barbel reaching gill-opening. Dorsal I 7; spine nearly as long as head; free edge of fin convex, with 2 rays longer than spine; 3 median scutes before adipose fin. Anal I 7. Caudal emarginate. Pectoral spine reaching middle of pelvics. Scutes $\frac{22-23}{20-21}$; humeral shields large, reaching base of pelvics and meeting below. Brownish above, yellowish below, with a broad blackish lateral band tapering backwards; fins immaculate.

Amazons (Teffé and Cudajas).

XXV.—*Some Considerations in regard to the Classification of the Order Thysanoptera*. By RICHARD S. BAGNALL, F.L.S., F.E.S., Hope Department of Zoology, University Museum, Oxford.

SINCE my papers on the Urothripidæ were published*, I have come to the conclusion that in retaining that family as a family of the suborder Tubulifera unnecessary difficulties will be created. I have already shown that whereas *Urothrips* superficially resembles the Tubulifera very closely, it really differs from true Tubulifera more strongly in its structure than do the members of the suborder Terebrantia; or, in other words, the two suborders Tubulifera and Terebrantia are more closely related to each other than *Urothrips* to either. I am now convinced that the only course one can reasonably take is to erect a new suborder for the reception of the family Urothripidæ, for which I propose the name

POLYSTIGMATA,

suggested by the character that appears to me to be of the greatest taxonomic value.

It will be well to briefly diagnose the three suborders.

* Annales Musei Nationalis Hungarici, 1909, vii. pp. 125-136, pl. iii., & Mém. 1^{er} Congrès International d'Entomologie, 1910, pp. 283-288.